

U.S. Serial No. 10/799,193

Docket No. 1232-5326

Amendments to the Claims

For the Examiner's convenience, this Amendment & Request for Reconsideration includes the text of all claims under examination. This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently amended): A printing method for forming an image by using a print head, wherein the print head has a plurality of arrayed ~~small heads~~ chips, the ~~small heads~~ chips each ~~have~~ having a plurality of print elements arranged in columns and having a plurality of print elements arranged in a number of time-division drive blocks, the print elements are equal in number to an integer times the number of time-division drive blocks, and the ~~small heads~~ chips are arranged so that at least two print elements in adjoining ~~small heads~~ chips are aligned in a scan direction forming a set of print elements;

the printing method comprising the steps of:

moving the print head and a print medium relative to each other in the scan direction that crosses a direction of the columns of the print elements; and
dividing the print elements into the plurality of drive blocks and activating the drive blocks of print elements on a time-division basis to form an image on the print medium;

wherein drive timings with which to activate the set of print elements aligned in the scan direction ~~are~~ have the same time-division drive timing.

U.S. Serial No. 10/799,193

Docket No. 1232-5326

2. (Original): A printing method according to claim 1, wherein the number of sets of print elements aligned in the scan direction is equal to an integer times the number of drive blocks.

3. (Original): A printing method according to claim 1, wherein the plurality of print elements in the print head are arranged in an entire widthwise printable range of the print medium.

4. (Original): A printing method according to claim 1, wherein the plurality of print elements in the print head are ink jet print elements that can be activated to eject ink from nozzles.

5. (Original): A printing method according to claim 4, wherein the ink jet print elements have electrothermal transducers that generate energy for ejecting ink.

6. (Currently amended): A printing apparatus for forming an image by using a print head, comprising: the printing apparatus; wherein
the a print head has having a plurality of arrayed small heads chips, the small
heads chips each have having a plurality of print elements arranged in columns and
having a plurality of print elements divided in a number of time-division drive blocks, the

U.S. Serial No. 10/799,193

Docket No. 1232-5326

print elements are equal in number to an integer times the number of time-division drive blocks;

the print head and a print medium are moved relative to each other in a scan direction that crosses a direction of the columns of the print elements;

the print elements of each of said are divided into the plurality of drive blocks and are activated in the drive blocks on a time-division basis to form an image on the print medium;

at least two print elements in adjoining small-heads chips are aligned in the scan direction forming a set of print elements; and

the number of sets or pairs of print elements in the adjoining small-heads chips aligned in the scan direction is equal to an integer times the number of time-division drive blocks.

7. (Original): A printing apparatus according to claim 6, wherein the print elements aligned in the scan direction are allocated to the same drive block for activation.

8. (Original): A printing apparatus according to claim 6, wherein the plurality of print elements in the print head are arranged in an entire widthwise printable range of the print medium.

U.S. Serial No. 10/799,193

Docket No. 1232-5326

9. (Original): A printing apparatus according to claim 6, wherein the plurality of print elements in the print head are ink jet print elements that can be activated to eject ink from nozzles.

10. (Original): A printing apparatus according to claim 9, wherein the ink jet print elements have electrothermal transducers that generate energy for ejecting ink.

11. (Currently amended): A print head for forming an image, comprising:
a plurality of arrayed ~~small heads~~ chips, the ~~small heads~~ chips each having a plurality of print elements arranged in columns and having a plurality of print elements arranged in a number of time-division drive blocks, the print elements being equal in number to an integer times the number of time-division drive blocks;

wherein the print head and a print medium are moved relative to each other in a scan direction that crosses a direction of the columns of the print elements;

wherein the print elements of each of the are divided into the plurality of drive blocks are and activated in the drive blocks on a time-division basis to form an image on the print medium;

wherein at least two print elements in adjoining ~~small heads~~ chips are aligned in the scan direction forming a set of print elements;

wherein the number of sets of print elements in the adjoining ~~small heads~~ chips aligned in the scan direction is equal to an integer times the number of drive blocks.

U.S. Serial No. 10/799,193

Docket No. 1232-5326

12. (Original): A print head according to claim 11, wherein the print elements aligned in the scan direction are allocated to the same drive block for activation.

13. (Original): A print head according to claim 11, wherein the plurality of print elements are arranged in an entire widthwise printable range of the print medium.

14. (Original): A print head according to claim 11, wherein the plurality of print elements are ink jet print elements that can be activated to eject ink from nozzles.

15. (Original): A print head according to claim 14, wherein the ink jet print elements have electrothermal transducers that generate energy for ejecting ink.

16. (Currently amended): A program for forming an image by using a print head, wherein the print head has a plurality of arrayed ~~small heads~~ chips, the ~~small heads~~ chips each have a plurality of print elements arranged in columns and having a plurality of print elements arranged in a number of time-division drive blocks, the print elements are equal in number to an integer times the number of time-division drive blocks, and the ~~small heads~~ chips are arranged so that at least two print elements in adjoining ~~small heads~~ chips are aligned in a scan direction forming a set of print elements, the program causing a computer to execute the steps comprising:

moving the print head and a print medium relative to each other in the scan direction that crosses a direction of the columns of the print elements;

U.S. Serial No. 10/799,193

Docket No. 1232-5326

~~dividing the print elements into the plurality of drive blocks and activating the drive blocks of print elements on a time-division basis to form an image on the print medium; and~~

~~activating the set of print elements aligned in the scan direction at the same time-division drive timing.~~

17. (Original): A storage media readable by a computer and storing the program of claim 16.